November 12, 2019

Mr. John Mannix
Assistant Superintendent, Operations
Monroe School District
200 East Fremont
Monroe, WA 98272

RE: PCB Monitoring
Sky Valley Educational Center – Administration Building
351 Short Colombia Street
Monroe, Washington

Dear Mr. Mannix:

PBS Engineering and Environmental, Inc. (PBS) performed Polychlorinated Biphenyl (PCB) surface and air testing in three rooms of the Administration Building at the Sky Valley Educational Center (SVEC) located at 351 Short Columbia Street, Monroe, Washington. The following report discusses background information, methodology, findings and conclusions.

BACKGROUND INFORMATION

The Monroe School District requested PBS to perform PCB air and surface wipe testing at the SVEC Administration Building in three rooms where evidence of failed fluorescent light fixture ballasts was discovered.

METHODOLOGY

The following is a description of the air and surface sample collection and analysis process. The Monroe School District provided PBS with a floor plan drawing that identified specific rooms to be sampled.

PCB Air Samples

PBS collected indoor air samples at three (3) locations within the Administration Building. These include the Storage/Server, West Office and East Office. See attached sample location diagram. The PCB air samples were collected using the Low Volume Polyurethane Foam Sampling Method. This method uses a vacuum pump with a glass tube that is fitted with a polyurethane foam (PUF) plug and no pre-filter. The PUF tube was pre-assembled and provided by Eurofins Test America in Sacramento, California. The air pump is calibrated before and after testing with a pre-calibrated rotameter. The rotameter is calibrated annually with a primary standard. PBS personnel wore disposable nitrile gloves to protect against cross-contamination between samples. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to Eurofins Test America. The samples were analyzed for PCBs using EPA Method T0-10A. Field Blanks (negative controls) were collected and included with air samples that were sent to the laboratory. A total of two (2) field blanks were collected during this activity. "Blanks" are unused PUF tubes that were handled similarly to all

other samples; however, no air was drawn through these "blank" tubes. Blanks are analyzed with each batch of air samples to help determine if the sample media or the handling process has influenced the results.

The EPA regulatory threshold for airborne PCBs established for this site is 100 nanograms per cubic meter (ng/m^3) of air.

PCB Surface Wipe Samples

PBS collected six (6) surface wipe samples in the same three (3) locations as identified above. See attached sample location diagram. The PCB surface sampling was performed using the wipe sampling method in 40 CFR Part 761. This method uses a gauze pad wetted with hexane and placed in a glass jar. The sample media was provided by ALS Laboratories. The hexane wetted gauze pad is wiped over a 100 cm^2 area using a disposable template as a guide and then placed in a glass jar. PBS personnel wore disposable nitrile gloves to protect against cross-contamination between samples. A total of two (2) field blanks were collected during this activity. The wipe samples were collected to determine the presence of PCB's. The samples were labeled with unique identification numbers, packaged and delivered with chain-of-custody documentation to ALS Laboratories. The samples were analyzed by NIOSH Method 5503 for PCBs.

The EPA regulatory threshold for PCBs in surface wipes is 10 micrograms (µg) per 100 cm^2.

FINDINGS

The following is a summary of our laboratory findings for this air and surface sampling activity.

Air Samples

Laboratory results revealed no detectable PCBs on the three (3) air samples collected and the two (2) blanks. See Table 1 below.

Table 1 – Air Sampling Results

Sample Number	Location	PCB Results (ng/m^3)
41373.000-01A	Storage/Server Room	Not Detected (ND)
41373.000-02A	West Office	ND
41373.000-03A	East Office	ND
41373.000-04A	Field Blank	ND
41373.000-05A	Field Blank	ND

ng/m^3 = nanograms/cubic meter

All final analytical results for air samples collected during this monitoring event were found to be below laboratory detection limits as well as EPA guidelines.

Surface Wipe Samples

Laboratory results revealed all six (6) surface wipe samples and the two (2) blanks collected in the Administration Building during this sampling event were below laboratory detection limits and the EPA threshold of 10 µg/100 cm^2. See Table 2 below.

Table 2 – Wipe Sampling Results

Sample Number	Location	PCB Results (µg/100 cm^2)
41373.000-01W	Storage/Server Room Floor	ND
41373.000-02W	Storage/Server Room Shelf	ND
41373.000-03W	West Office Floor	ND
41373.000-04W	West Office Cabinet	ND
41373.000-05W	East Office Floor	ND
41373.000-06W	East Office, East Bookshelf	ND
41373.000-08W	Field Blank	ND
41373.000-09W	Field Blank	ND

µg/100 cm^2 = micrograms/100 square centimeters

CONCLUSIONS

Based on laboratory results of the air and surface wipe samples, no detectable PCBs were found in the locations tested.

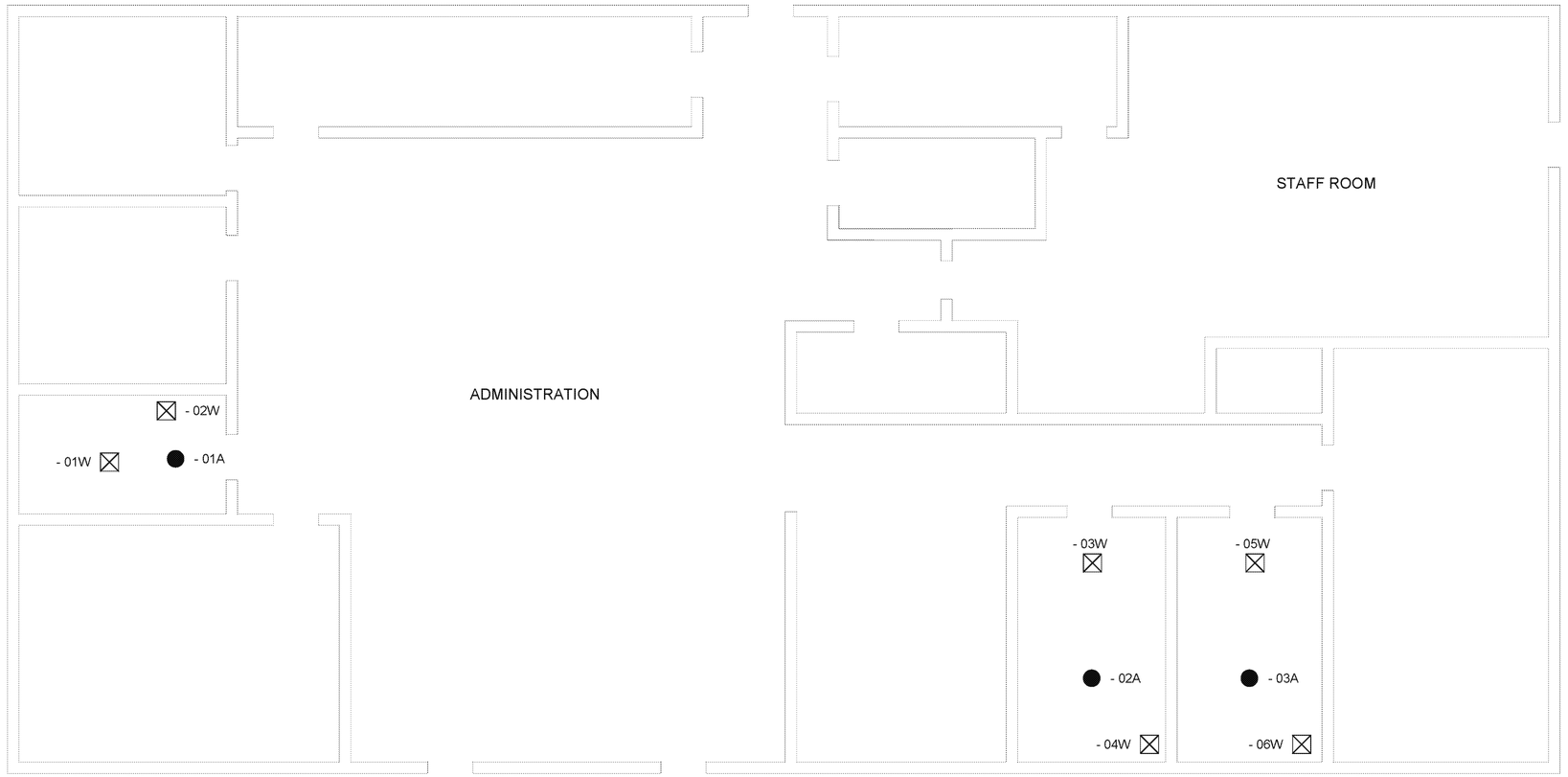
Please do not hesitate to contact me if you have any questions regarding this letter report or require additional information.

Sincerely,
PBS Engineering and Environmental, Inc.

Digitally signed by Gregg Middaugh
Date: 2019.11.12 08:08:35 -08'00'

Gregg Middaugh
Senior Project Manager
Industrial Hygiene

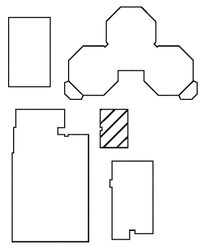
Attachments: Sample location Diagrams
Air Sample Laboratory Report
Surface Wipe Sample Laboratory Report



ADMINISTRATION BUILDING
NOT TO SCALE

LEGEND

●	- 01A	PCB AIR SAMPLING LOCATION AND IDENTIFIER
☒	- 01W	PCB SURFACE WIPE SAMPLING LOCATION AND IDENTIFIER



KEY PLAN
NOT TO SCALE

PREPARED FOR: MONROE SCHOOL DISTRICT

PBS Engineering and Environmental Inc.
214 E Galer Street, Ste 300
Seattle, WA 98102
206.233.9639
pbsusa.com

PBS

MONROE SCHOOL DISTRICT

PCB TESTING PLAN
SKY VALLEY EDUCATIONAL CENTER
351 SHORT COLUMBIA STREET, MONROE, WASHINGTON

NO	REVISION	DATE	BY	APPD

DRAWN BY: KJB
CHECKED: KS
DATE: NOVEMBER 2019
PROJECT NUMBER: 41373.000
SHEET DRAWING NO: 1
SHEET 1 OF 1

FULL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 22X34, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

Filename: L:\Projects\41000\41373 Monroe SD\41373.000 Sky Valley Education Center\41373.000 Sky Valley IAQ\Task 12 Ballast Survey and Admin Testing\CAD\41373.000_Fig_1.dwg Layout Tab: 3 User: Katie Breyman CAD Plot Date/Time: 11/11/2019 1:21:31 PM

ANALYTICAL REPORT

Report Date: October 31, 2019

Gregg Middaugh
PBS Engineering & Environmental
214 E. Galer St.
Suite 300
Seattle, WA 98102

Phone: (206) 233-9639

E-mail: gregg.middaugh@pbsusa.com

Workorder: **34-1930908**
Client Project ID: Sky Valley Ed. Center
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **41373.000-01W** Collected: 10/29/2019
Lab ID: 1930908001 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-02W** Collected: 10/29/2019
Lab ID: 1930908002 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

ANALYTICAL REPORT

Workorder: **34-1930908**
Client Project ID: Sky Valley Ed. Center
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **41373.000-03W** Collected: 10/29/2019
Lab ID: 1930908003 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-04W** Collected: 10/29/2019
Lab ID: 1930908004 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-05W** Collected: 10/29/2019
Lab ID: 1930908005 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: **34-1930908**
Client Project ID: Sky Valley Ed. Center
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **41373.000-05W** Collected: 10/29/2019
Lab ID: 1930908005 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-06W** Collected: 10/29/2019
Lab ID: 1930908006 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-07W** Collected: 10/29/2019
Lab ID: 1930908007 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	<0.10	0.10
Aroclor 1260	<0.10	<0.10	0.10
Aroclor 1221	<0.20	<0.20	0.20
Aroclor 1232	<0.10	<0.10	0.10
Aroclor 1242	<0.10	<0.10	0.10
Aroclor 1248	<0.10	<0.10	0.10

Results Continued on Next Page

ANALYTICAL REPORT

Workorder: **34-1930908**
Client Project ID: Sky Valley Ed. Center
Purchase Order: 41373.000
Project Manager: Stella Hanis

Analytical Results

Sample ID: **41373.000-07W** Collected: 10/29/2019
Lab ID: 1930908007 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area 100 cm²** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1254	<0.10	<0.10	0.10
Aroclor 1262	<0.10	<0.10	0.10
Aroclor 1268	<0.10	<0.10	0.10

Sample ID: **41373.000-08W Blank #1** Collected: 10/29/2019
Lab ID: 1930908008 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area Not Applicable** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	NA	0.10
Aroclor 1260	<0.10	NA	0.10
Aroclor 1221	<0.20	NA	0.20
Aroclor 1232	<0.10	NA	0.10
Aroclor 1242	<0.10	NA	0.10
Aroclor 1248	<0.10	NA	0.10
Aroclor 1254	<0.10	NA	0.10
Aroclor 1262	<0.10	NA	0.10
Aroclor 1268	<0.10	NA	0.10

Sample ID: **41373.000-09W Blank #2** Collected: 10/29/2019
Lab ID: 1930908009 Sampling Location: Sky Valley Ed Center Received: 10/31/2019
Method: **NIOSH 5503 Mod.** Media: Wipe Instrument: GCE03
Sampling Info: **Area Not Applicable** Analyzed: 10/31/2019 (250991)

Analyte	Result (ug/sample)	Result (ug/100cm²)	RL (ug/sample)
Aroclor 1016	<0.10	NA	0.10
Aroclor 1260	<0.10	NA	0.10
Aroclor 1221	<0.20	NA	0.20
Aroclor 1232	<0.10	NA	0.10
Aroclor 1242	<0.10	NA	0.10
Aroclor 1248	<0.10	NA	0.10
Aroclor 1254	<0.10	NA	0.10
Aroclor 1262	<0.10	NA	0.10
Aroclor 1268	<0.10	NA	0.10

ANALYTICAL REPORT

Workorder: **34-1930908**
Client Project ID: Sky Valley Ed. Center
Purchase Order: 41373.000
Project Manager: Stella Hanis

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
NIOSH 5503 Mod.	/S/ Mila V. Potekhin 10/31/2019 16:14	/S/ Matthew Roberts 10/31/2019 16:54

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	PJLA (DoD ELAP)	L17-506	http://www.pjlabs.com
	PJLA (ISO 17025)	L17-507-R1	http://www.pjlabs.com
	Utah (TNI)	UT00953	http://lams.nelac-institute.org/search
	Iowa (TNI)	IA# 376	http://www.shl.uiowa.edu/labcert/idnr/
	Kansas	E-10416	http://www.kdheks.gov/envlab/disclaimer.html
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L18-606	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L17-507-R1	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
NA = Not Applicable.
** No result could be reported, see sample comments for details.
< Means this testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-55843-1
Client Project/Site: Sky Valley Ballast Survey

For:
PBS Engineering and Environmental
2517 Eastlake Ave Suite 100
Seattle, Washington 98102

Attn: Gregg Middaugh

Authorized for release by:
11/6/2019 9:53:31 AM

Lee Ann Heathcote, Project Manager II
(916)373-5600
leeann.heathcote@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: PBS Engineering and Environmental
Project/Site: Sky Valley Ballast Survey

Job ID: 320-55843-1

Job ID: 320-55843-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative
320-55843-1

Receipt
The samples were received on 10/31/2019 7:26 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 16.8º C.

Receipt Exceptions
The following samples were received outside the required temperature criteria: -01A (320-55843-1), -02A (320-55843-2), -03A (320-55843-3), -04A BLANK #1 (320-55843-4) and -05A BLANK #2 (320-55843-5). The cooler had one gel pack on the bottom of the cooler. There was bubble-wrap surrounding the samples as well as bubble-wrap in between the samples and the gel pack. No temperature blank was provided.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Analysis was not marked for "Blank" samples (320-55843-4 and 320-55843-5). Client was contacted and confirmed analysis of these samples.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: PBS Engineering and Environmental
Job ID: 320-55843-1
Project/Site: Sky Valley Ballast Survey

Client Sample ID: -01A
Lab Sample ID: 320-55843-1

No Detections.

Client Sample ID: -02A
Lab Sample ID: 320-55843-2

No Detections.

Client Sample ID: -03A
Lab Sample ID: 320-55843-3

No Detections.

Client Sample ID: -04A BLANK #1
Lab Sample ID: 320-55843-4

No Detections.

Client Sample ID: -05A BLANK #2
Lab Sample ID: 320-55843-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: -01A
Lab Sample ID: 320-55843-1

Date Collected: 10/29/19 23:02
Matrix: Air
Date Received: 10/31/19 07:26
Sample Container: PUF

Method: TO-10A - PCBs in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1221	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1232	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1242	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1248	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1254	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1
PCB-1260	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*94*		*60 - 120*	*10/31/19 10:07*	*11/04/19 15:58*	*1*
DCB Decachlorobiphenyl	*110*		*60 - 120*	*10/31/19 10:07*	*11/04/19 15:58*	*1*

Client Sample ID: -02A
Lab Sample ID: 320-55843-2

Date Collected: 10/29/19 23:04
Matrix: Air
Date Received: 10/31/19 07:26
Sample Container: PUF

Method: TO-10A - PCBs in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1221	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1232	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1242	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1248	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1254	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1
PCB-1260	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*60 - 120*	*10/31/19 10:07*	*11/04/19 16:18*	*1*
DCB Decachlorobiphenyl	*96*		*60 - 120*	*10/31/19 10:07*	*11/04/19 16:18*	*1*

Client Sample ID: -03A
Lab Sample ID: 320-55843-3

Date Collected: 10/29/19 23:05
Matrix: Air
Date Received: 10/31/19 07:26
Sample Container: PUF

Method: TO-10A - PCBs in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1221	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1232	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1242	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1248	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1254	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1
PCB-1260	ND		370		ng/m3 PUF		10/31/19 10:07	11/04/19 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*93*		*60 - 120*	*10/31/19 10:07*	*11/04/19 16:39*	*1*
DCB Decachlorobiphenyl	*105*		*60 - 120*	*10/31/19 10:07*	*11/04/19 16:39*	*1*

Client Sample ID: -04A BLANK #1
Lab Sample ID: 320-55843-4

Date Collected: 10/29/19 00:00
Matrix: Air
Date Received: 10/31/19 07:26
Sample Container: PUF

Method: TO-10A - PCBs in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1221	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1232	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1242	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1248	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1254	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1
PCB-1260	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*60 - 120*	*10/31/19 10:21*	*11/04/19 16:59*	*1*
DCB Decachlorobiphenyl	*98*		*60 - 120*	*10/31/19 10:21*	*11/04/19 16:59*	*1*

Client Sample ID: -05A BLANK #2
Lab Sample ID: 320-55843-5

Date Collected: 10/29/19 00:00
Matrix: Air
Date Received: 10/31/19 07:26
Sample Container: PUF

Method: TO-10A - PCBs in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1221	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1232	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1242	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1248	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1254	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1
PCB-1260	ND		750		ng/m3 PUF		10/31/19 10:21	11/04/19 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*60 - 120*	*10/31/19 10:21*	*11/04/19 17:20*	*1*
DCB Decachlorobiphenyl	*100*		*60 - 120*	*10/31/19 10:21*	*11/04/19 17:20*	*1*

Surrogate Summary

Client: PBS Engineering and Environmental
Project/Site: Sky Valley Ballast Survey

Job ID: 320-55843-1

Method: TO-10A - PCBs in Ambient Air

Matrix: Air

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(60-120)	(60-120)
320-55843-1	-01A	94	110
320-55843-2	-02A	89	96
320-55843-3	-03A	93	105
320-55843-4	-04A BLANK #1	86	98
320-55843-5	-05A BLANK #2	89	100
LCS 320-334981/2-B	Lab Control Sample	91	89
LCSD 320-334981/3-B	Lab Control Sample Dup	92	100
MB 320-334981/1-B	Method Blank	86	102

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: TO-10A - PCBs in Ambient Air

Lab Sample ID: MB 320-334981/1-B
Matrix: Air
Analysis Batch: 335864

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 334982

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1221	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1232	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1242	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1248	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1254	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1
PCB-1260	ND		750		ng/m3 PUF		10/31/19 10:07	11/04/19 14:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*60 - 120*	*10/31/19 10:07*	*11/04/19 14:56*	*1*
DCB Decachlorobiphenyl	*102*		*60 - 120*	*10/31/19 10:07*	*11/04/19 14:56*	*1*

Lab Sample ID: LCS 320-334981/2-B
Matrix: Air
Analysis Batch: 335864

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 334982

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			2000	1880		ng/m3 PUF		94	65 - 125		
PCB-1260			2000	2130		ng/m3 PUF		106	65 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*60 - 120*
DCB Decachlorobiphenyl	*89*		*60 - 120*

Lab Sample ID: LCSD 320-334981/3-B
Matrix: Air
Analysis Batch: 335864

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 334982

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			2000	1860		ng/m3 PUF		93	65 - 125	1	30
PCB-1260			2000	2060		ng/m3 PUF		103	65 - 125	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*92*		*60 - 120*
DCB Decachlorobiphenyl	*100*		*60 - 120*

Air - GC Semi VOA

Pre Prep Batch: 334981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-55843-1	-01A	Total/NA	Air	PUF to Air	
320-55843-2	-02A	Total/NA	Air	PUF to Air	
320-55843-3	-03A	Total/NA	Air	PUF to Air	
320-55843-4	-04A BLANK #1	Total/NA	Air	PUF to Air	
320-55843-5	-05A BLANK #2	Total/NA	Air	PUF to Air	
MB 320-334981/1-B	Method Blank	Total/NA	Air	PUF to Air	
LCS 320-334981/2-B	Lab Control Sample	Total/NA	Air	PUF to Air	
LCSD 320-334981/3-B	Lab Control Sample Dup	Total/NA	Air	PUF to Air	

Prep Batch: 334982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-55843-1	-01A	Total/NA	Air	TO-10	334981
320-55843-2	-02A	Total/NA	Air	TO-10	334981
320-55843-3	-03A	Total/NA	Air	TO-10	334981
320-55843-4	-04A BLANK #1	Total/NA	Air	TO-10	334981
320-55843-5	-05A BLANK #2	Total/NA	Air	TO-10	334981
MB 320-334981/1-B	Method Blank	Total/NA	Air	TO-10	334981
LCS 320-334981/2-B	Lab Control Sample	Total/NA	Air	TO-10	334981
LCSD 320-334981/3-B	Lab Control Sample Dup	Total/NA	Air	TO-10	334981

Analysis Batch: 335864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-55843-1	-01A	Total/NA	Air	TO-10A	334982
320-55843-2	-02A	Total/NA	Air	TO-10A	334982
320-55843-3	-03A	Total/NA	Air	TO-10A	334982
320-55843-4	-04A BLANK #1	Total/NA	Air	TO-10A	334982
320-55843-5	-05A BLANK #2	Total/NA	Air	TO-10A	334982
MB 320-334981/1-B	Method Blank	Total/NA	Air	TO-10A	334982
LCS 320-334981/2-B	Lab Control Sample	Total/NA	Air	TO-10A	334982
LCSD 320-334981/3-B	Lab Control Sample Dup	Total/NA	Air	TO-10A	334982

Lab Chronicle

Client: PBS Engineering and Environmental
Project/Site: Sky Valley Ballast Survey

Job ID: 320-55843-1

Client Sample ID: -01A
Lab Sample ID: 320-55843-1
Date Collected: 10/29/19 23:02
Matrix: Air
Date Received: 10/31/19 07:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	PUF to Air					334981	10/31/19 10:06	CCL	TAL SAC
Total/NA	Prep	TO-10			2010 L	10 mL	334982	10/31/19 10:07	CCL	TAL SAC
Total/NA	Analysis	TO-10A		1			335864	11/04/19 15:58	AP1	TAL SAC

Client Sample ID: -02A
Lab Sample ID: 320-55843-2
Date Collected: 10/29/19 23:04
Matrix: Air
Date Received: 10/31/19 07:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	PUF to Air					334981	10/31/19 10:06	CCL	TAL SAC
Total/NA	Prep	TO-10			2010 L	10 mL	334982	10/31/19 10:07	CCL	TAL SAC
Total/NA	Analysis	TO-10A		1			335864	11/04/19 16:18	AP1	TAL SAC

Client Sample ID: -03A
Lab Sample ID: 320-55843-3
Date Collected: 10/29/19 23:05
Matrix: Air
Date Received: 10/31/19 07:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	PUF to Air					334981	10/31/19 10:06	CCL	TAL SAC
Total/NA	Prep	TO-10			2010 L	10 mL	334982	10/31/19 10:07	CCL	TAL SAC
Total/NA	Analysis	TO-10A		1			335864	11/04/19 16:39	AP1	TAL SAC

Client Sample ID: -04A BLANK #1
Lab Sample ID: 320-55843-4
Date Collected: 10/29/19 00:00
Matrix: Air
Date Received: 10/31/19 07:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	PUF to Air					334981	10/31/19 10:20	CCL	TAL SAC
Total/NA	Prep	TO-10			1000 L	10 mL	334982	10/31/19 10:21	CCL	TAL SAC
Total/NA	Analysis	TO-10A		1			335864	11/04/19 16:59	AP1	TAL SAC

Client Sample ID: -05A BLANK #2
Lab Sample ID: 320-55843-5
Date Collected: 10/29/19 00:00
Matrix: Air
Date Received: 10/31/19 07:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	PUF to Air					334981	10/31/19 10:20	CCL	TAL SAC
Total/NA	Prep	TO-10			1000 L	10 mL	334982	10/31/19 10:21	CCL	TAL SAC
Total/NA	Analysis	TO-10A		1			335864	11/04/19 17:20	AP1	TAL SAC

Laboratory References:
TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 320-55843-1
Project/Site: Sky Valley Ballast Survey

Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	01-20-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
California	State	2897	01-31-20
Colorado	State	CA0004	08-31-20
Connecticut	State	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Georgia	State	4040	01-29-20
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State	CA000442020-1	07-31-20
New Hampshire	NELAP	2997	04-18-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	US Federal Programs	P330-18-00239	07-31-21
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA000442019-01	02-29-20
Vermont	State	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: PBS Engineering and Environmental
Project/Site: Sky Valley Ballast Survey

Job ID: 320-55843-1

Method	Method Description	Protocol	Laboratory
TO-10A	PCBs in Ambient Air	EPA	TAL SAC
PUF to Air	PUF to Air Conversion	None	TAL SAC
TO-10	Extraction of Pesticide/PCBs in (Ambient Air)	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: PBS Engineering and Environmental
Project/Site: Sky Valley Ballast Survey

Job ID: 320-55843-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-55843-1	-01A	Air	10/29/19 23:02	10/31/19 07:26	
320-55843-2	-02A	Air	10/29/19 23:04	10/31/19 07:26	
320-55843-3	-03A	Air	10/29/19 23:05	10/31/19 07:26	
320-55843-4	-04A BLANK #1	Air	10/29/19 00:00	10/31/19 07:26	
320-55843-5	-05A BLANK #2	Air	10/29/19 00:00	10/31/19 07:26	

TestAmerica Sacramento

880 Riverside Parkway
West Sacramento, CA 95605
(916) 373-5600

Sorbent Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information	Project Manager: Gregg Middaugh	Samples Collected By: Justin Day	COC No: 1 of 1 COCs
Company Name: PBS Eng. + Env.	Phone: 206-255-4659		
Address: 214 E Galer St. Ste 300	Email: gregg.middaugh@pbsusa.com		For Lab Use Only:
City/State/Zip: Seattle, WA 98102	Site Contact:		Walk-in Client:
Phone: 206-255-4659	TA Contact: Lee Ann Heathcote (916) 374-4333		Lab Sampling:
Project Name: Sky Valley Ballast Survey	Analysis Turnaround Time		Job / SDG No.:
Site/Location: Monroe, WA	Standard (Specific):		(See below for Add'l Items)
P.O.# 41373.000	Rush (Specify): ASAP		

Sample Identification	Sample Date(s)	Time Start	Time Stop	No. of Containers	Sample Volume (liters)	TO-13A SVOCs	TO-13A SIM-PAHs	TO-10A PCBs	TO-4A	TO-9	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Sample Specific Notes:
41373.000																		
-01A	10/29/19	16:20	23:02		2,010 L			X					X					Storage Room
-02A	↓	16:22	23:04		2,010 L			X					X					W. Office
-03A	↓	16:23	23:05		2,010 L			X					X					E. Office
-04A Blank #1	↓	BLANK																
-05A Blank #2	↓	BLANK																

320-55843 Chain of Custody

Temperature (Celsius)		
	Interior	Ambient
Start		
Stop		

Temperature (Celsius)		
	Interior	Ambient
Start		
Stop		

Special Instructions/QC Requirements & Comments:
Results reported in ng/m³

Samples Shipped by: J. Day / PBS	Date / Time: 10/30/19 1430	Samples Received by: eta SAC 726 10/31/19
Samples Relinquished by:	Date / Time:	Received by:
Relinquished by:	Date / Time:	Received by:
Lab Use Only: Shipper Name:	Opened by:	Condition:

Form No. CA-C-WI-003, dated 10/25/2017

~~* No analysis indicated. MAN 10/31/19~~

* NO analysis indicated. MAN 10/31/19

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 320-55843-1

Login Number: 55843
List Number: 1
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	gel packs
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	